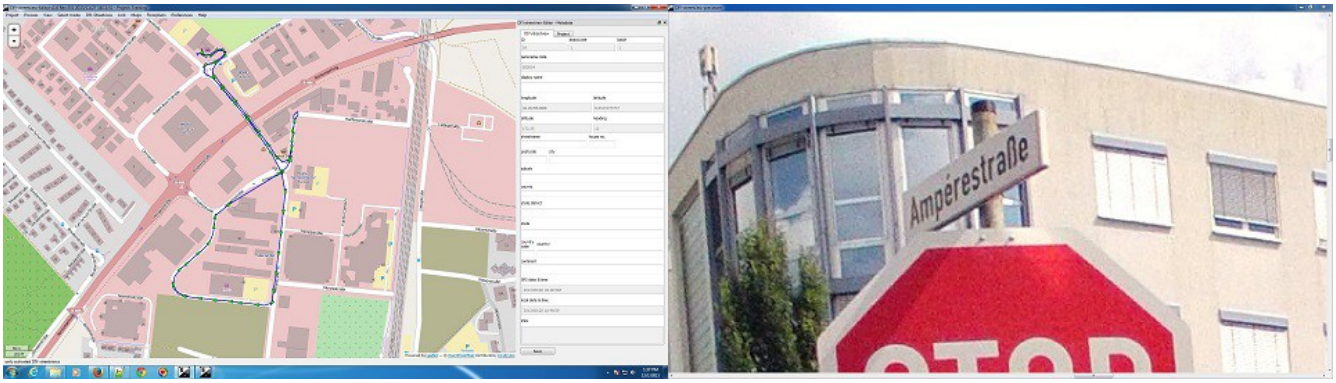
DIY-streetview Editor

for Windows 7

Manual

for version 1.0
rev. 332



works best with 2 monitors

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About this Manual

This manual is available in English language only.

This manual also is included with the DIY-streetview Editor:
Help → **User Manual** or the **F1** key.

Updates are available at http://www.diy-streetview.com/diy-streetview-editor

Please save updated manuals to this folder:
DiySVEditor\user-manual\DIY-streetview_Editor_User_Manual.pdf

Customers of the DIY-streetview Camera System have received the
Editor work-flow manual v0.1.pdf that explains how to use the Editor output with the provided processing programs and players.

If you purchased the Editor only please use **Project** → **Export to...** → **csv.**

Shortcuts

Print the
DIY-streetview Editor cheat sheet for better overview of all the key combinations.

Most important are:

Menu	Shortcut
View → Show Metadata	Alt+M
View → Show Panorama	Alt+P
Process → Undo	Ctrl+Z
Process → Redo	Ctrl+Y
There are 100 undo/redo steps.	
Select Mode → Select all	Ctrl+A
Select Mode → Unselect all	Ctrl+D

From time to time you should save your project to protect against data loss:

Project → Save	Ctrl+S

Support

Only the latest version of the DIY-streetview Editor is supported.

Before contacting support please check if a new version is available at
http://www.diy-streetview.com/diy-streetview-editor

See Chapter **Advanced tasks - Update** for how to update.

Always email the
DIYsvEditor\logs\log.txt
file with your support request.

For known issues read the last page of this manual:
Known Issues

Support is available by email at support@diy-streetview.com.

Preparation

Download

The latest version of the DIY-streetview Editor is available from
http://www.diy-streetview.com/diy-streetview-editor

Before installing the DIY-streetview Editor please download and install two of these Microsoft programs:

Microsoft .NET Framework 4 (Standalone Installer)
For 32 bit and 64 bit Windows:
http://www.microsoft.com/en-us/download/details.aspx?id=17718

Microsoft Visual C++ 2010 Redistributable Package
For 32 bit, x86:
http://www.microsoft.com/en-us/download/details.aspx?id=5555

For 64 bit, x64:
http://www.microsoft.com/en-us/download/details.aspx?id=14632

Installation

Unzip the **DIYsvEditor.zip** to folder **C:\Users\me\Downloads**

Download Training data

It is strongly recommended to use the Training data to learn how to operate the DIY-streetview Editor.

The Training data for this manual is available for download:
http://s3.amazonaws.com/diysv-downloads/Training_Files.zip

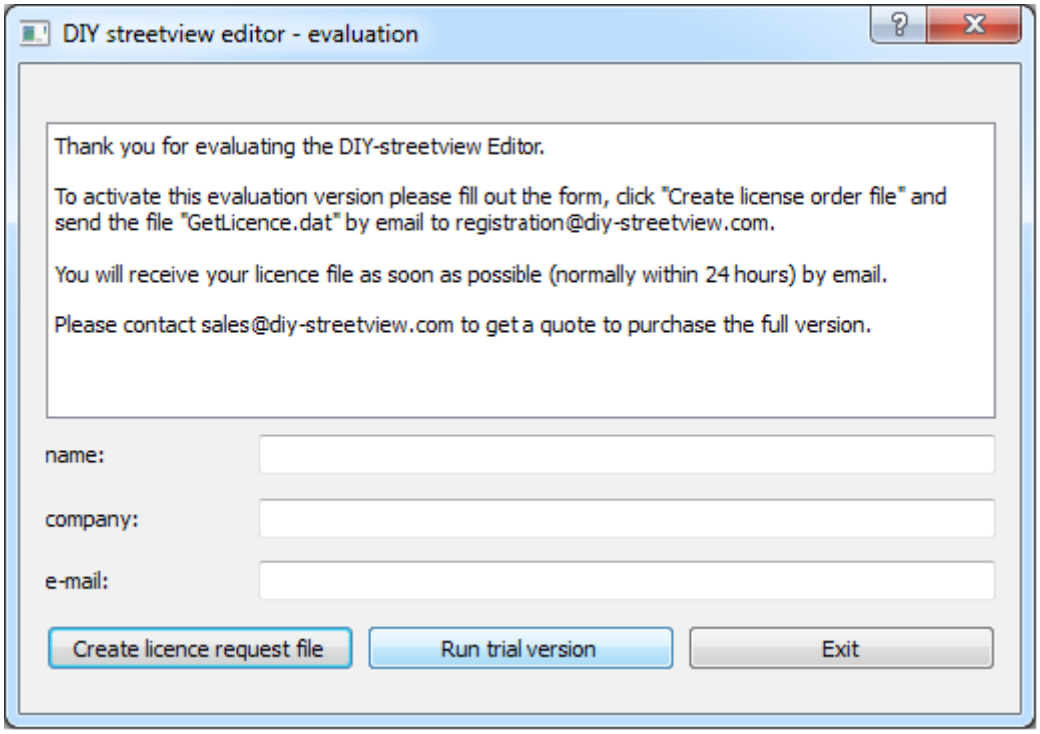
The Training data includes 109 panoramas, Local Map Tiles, Local Floor Tiles and a geotiff floorplan.

Size is app. 448 MB.

Unzip the **Training_Files.zip** file.

Registration

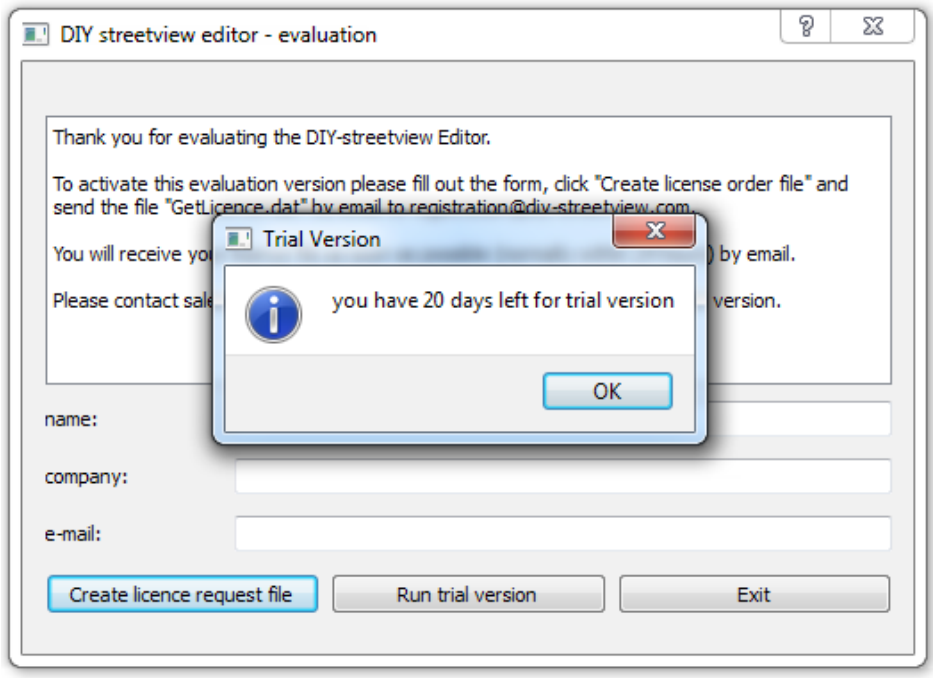
When starting the DIY-streetview Editor the first time you need to fill in your data:


DIY streetview editor - evaluation
Thank you for evaluating the DIY-streetview Editor.
To activate this evaluation version please fill out the form, click "Create license order file" and send the file "GetLicence.dat" by email to registration@diy-streetview.com.
You will receive your licence file as soon as possible (normally within 24 hours) by email.
Please contact sales@diy-streetview.com to get a quote to purchase the full version.
name:
company:
e-mail:
Create licence request file
Run trial version
Exit

Open the **DIYsvEditor\licence** folder.
Email the **getLicence.dat** to registration@diy-streetview.com
You will receive the Evaluation license file **Licence.dat** within a day.
Save **Licence.dat** to the **DIYsvEditor\licence** folder.

The license works with this PC only.

Start the Editor.
Click **OK**.
Click **Run trail version**.


DIY streetview editor - evaluation
Thank you for evaluating the DIY-streetview Editor.
To activate this evaluation version please fill out the form, click "Create license order file" and
Trial Version
you have 20 days left for trial version
OK
name:
company:
e-mail:
Create licence request file
Run trial version
Exit

Limitations of the Evaluation Version

- Valid for 2 weeks
- Internet-Access needed
- Firewall not to block time-servers
- Max. 500 panoramas in project

The full Version has none of the above limitations.
It can work 100% offline.

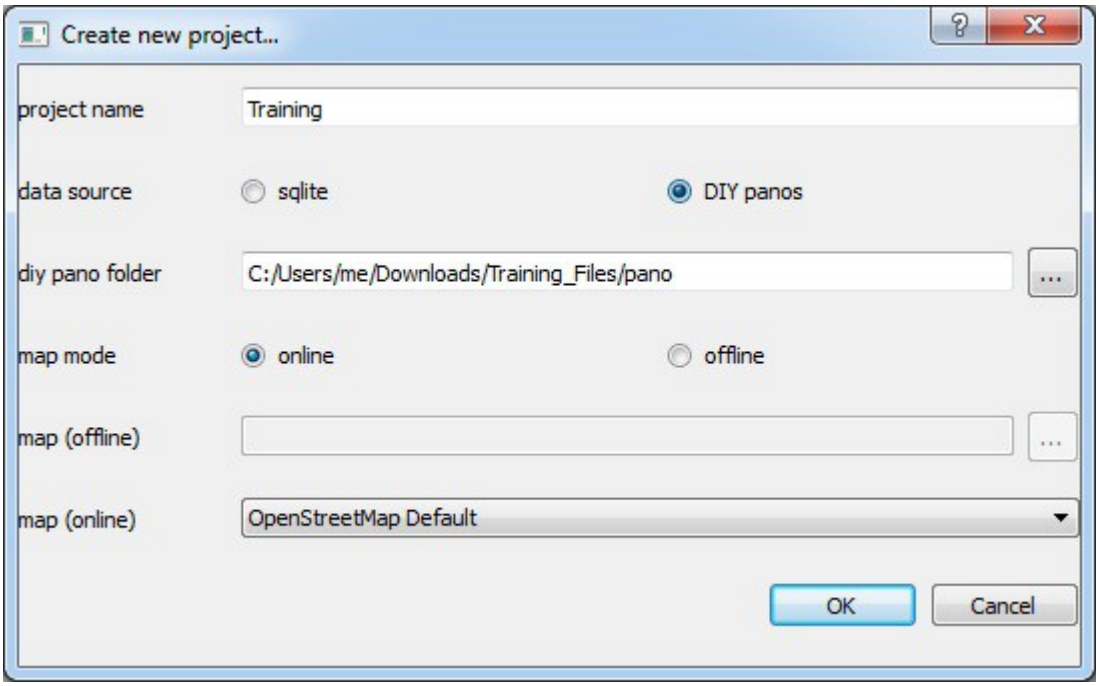
The full version includes all non-major updates free of charge.
Example:
Version 1.0 is purchased. All versions up to version 1.9 are free.
When version 2 will be available, charges will apply to update.

Please contact sales@diy-streetview.com to purchase the DIY-streetview Editor.

Training

New Project “Training”

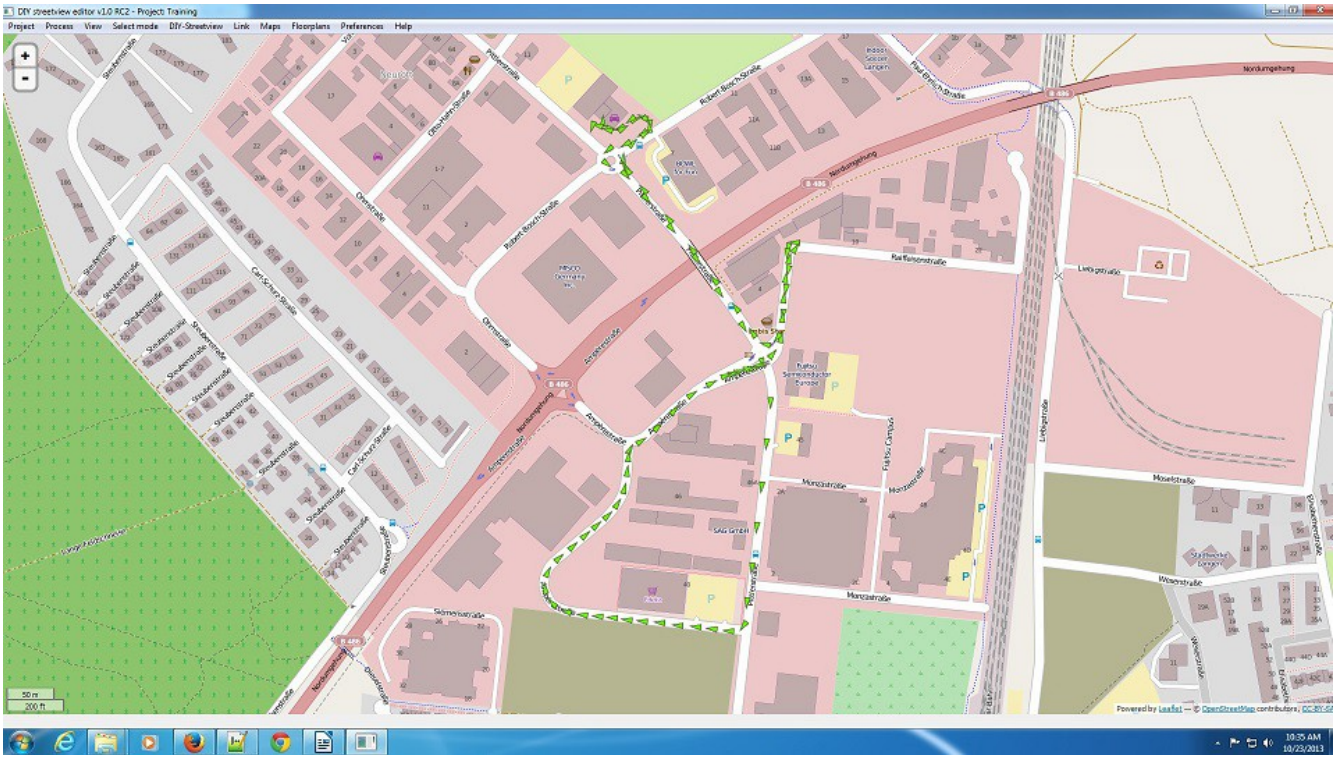
Start the DIY-streetview Editor.
Project → New Project
Fill in:
Project Name: **Training**
data source: **DIY panos**
DIY pano folder: Select the **pano** folder from the unzipped **Training_Files.zip**.
Map mode: **online**
map (online): **Leaf this as it is. You can change the map later.**



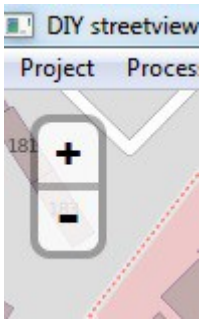
Click **OK**.

The panoramas from the **pano** folder will be loaded.

What you should see:



Each green arrow represents a Panorama. The arrows point into the direction the middle of the panorama looks at:



Zoom using the mouse wheel or the + and - buttons:

Please notice maps might not be available for all zoom levels.
Read the **Set-up Maps** paragraph for more info.

We assume this setup for the Training.

Set-up - Language

Right now the DIY-streetview Editor supports the following languages:

English
Chinese
German

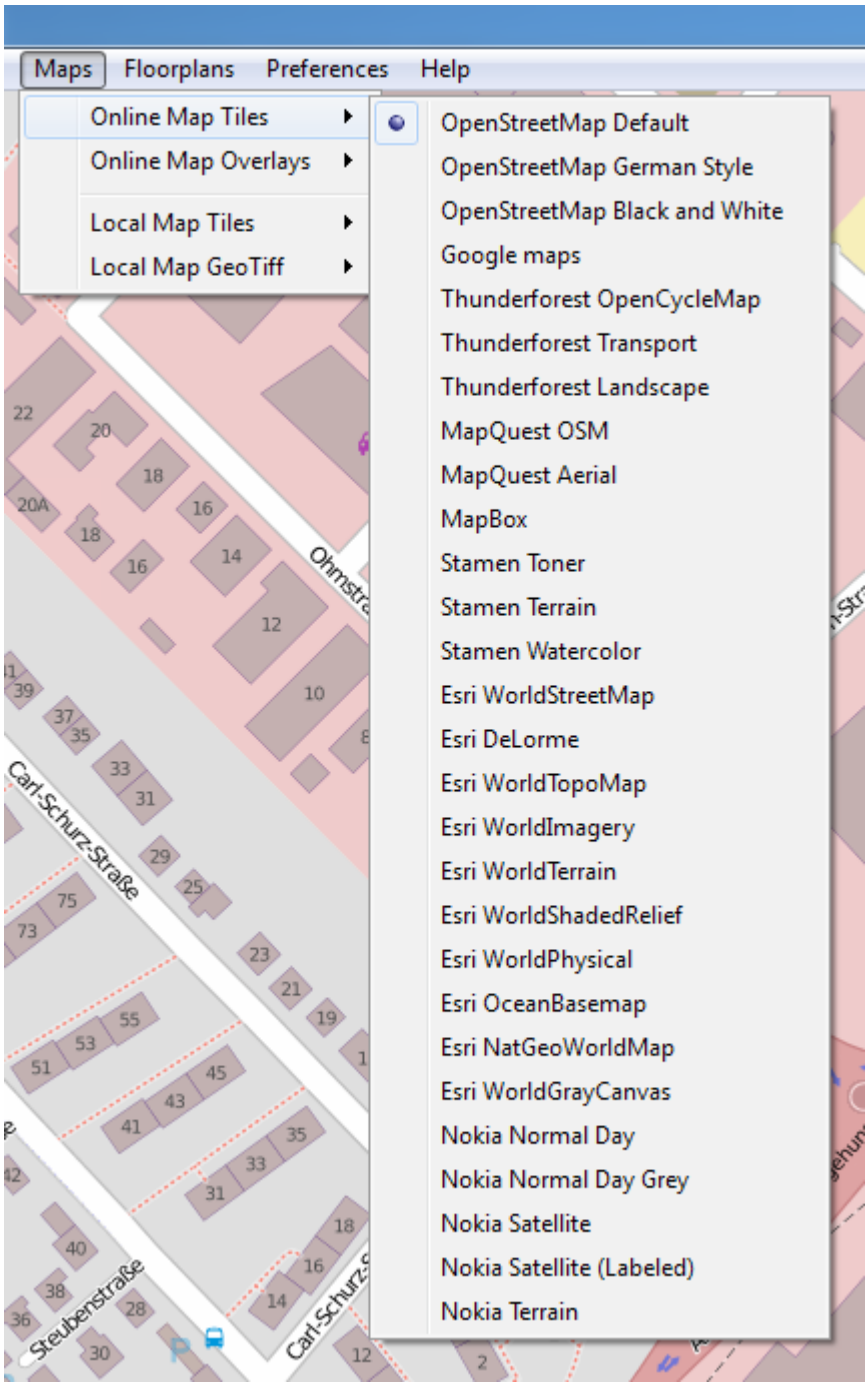
You can set the language in **Preferences** → **Language**

Please mail support@diy-streetview.com if you like to contribute a translation.

We assume English language for the Training.

Set-up - Online Map Tiles

You can pick aerial images and maps from the list.



Please notice that not all aerial images and maps are available for all zoom levels.

Also sometimes providers make changes or go offline. Therefore some might not work.

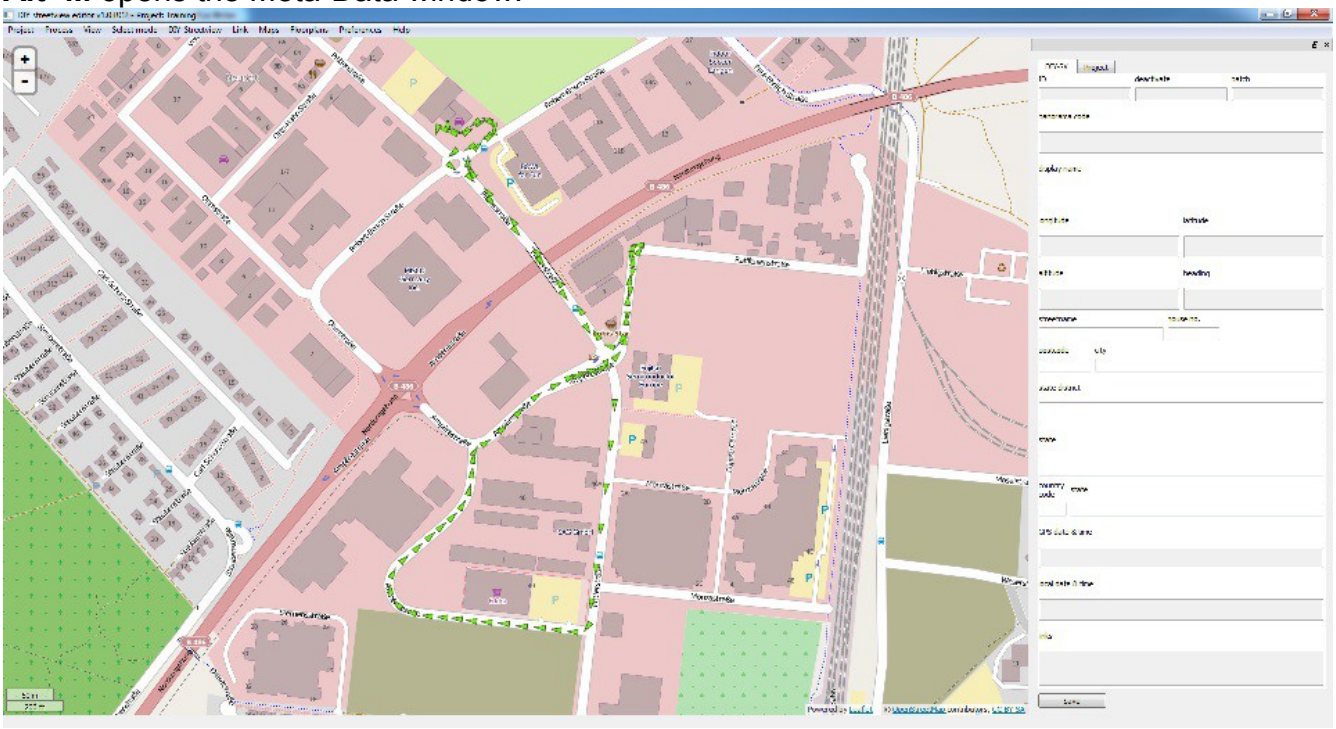
In addition to the maps you can switch on/off the Online Map Overlays.

Or use your own local maps.

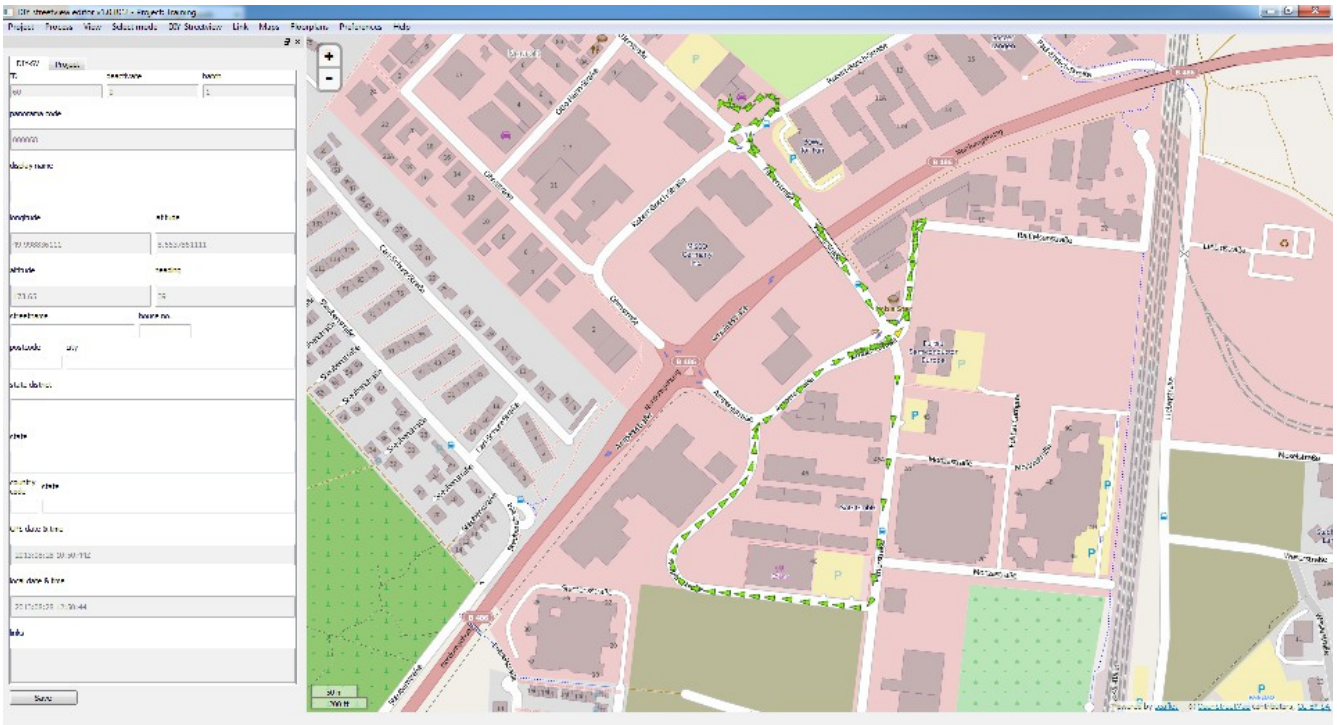
We assume the first map “OpenStreetMap” Default for the Training.

Set-up - Meta-Data Window

Alt+M opens the Meta-Data window:

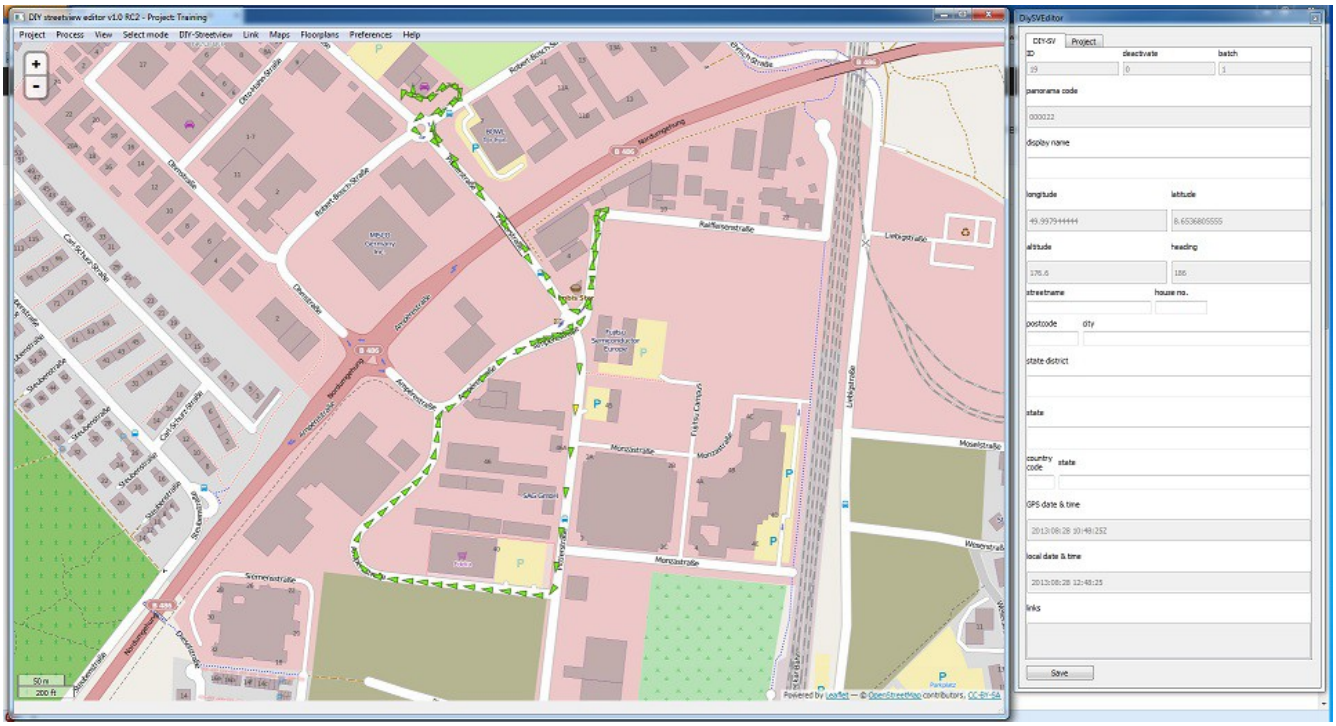


The Meta Data window is dockable.
You can grab it at the top with the mouse and move it to these positions:
Top, left, bottom, right.



You also can un-dock the Meta-Data window and arrange the 2 windows in any way that suits you.

Map and Meta-Data window arranged side-by-side:



This mode is slightly different from docket at the right side.

When lost, close and re-open the DIY-streetview Editor:

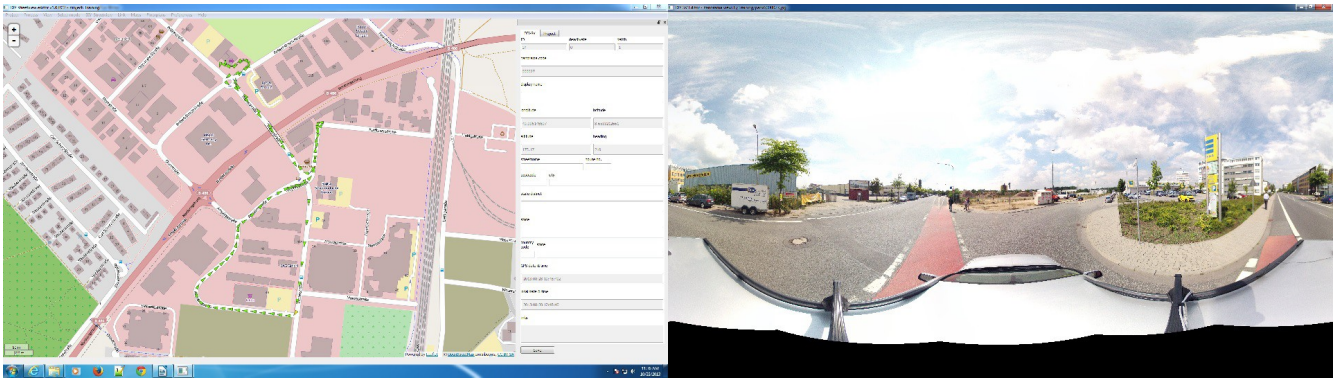
Project → Save Project
Project → Exit
Open your existing project with **Project→ Open Project → Training.diypro**

Alt+M always opens the Meta-Data window docked at the right-hand side.

Set-up - Panorama Window

Alt+P opens the Panorama window
Then **click a green icon** for the panorama to be displayed.
Then click **Alt+tab** to bring back the Panorama window.

It is strongly recommended to connect **2 monitors** to your PC.
Then move the Panorama Window to the second screen and maximize it.
Whenever you select a new green icon, the corresponding Panorama will be displayed:



We will assume this setup for the training.

In case you do not have 2 monitors, close all other programs and switch back-and-forth between the Windows with the **Alt+tab** key combination.

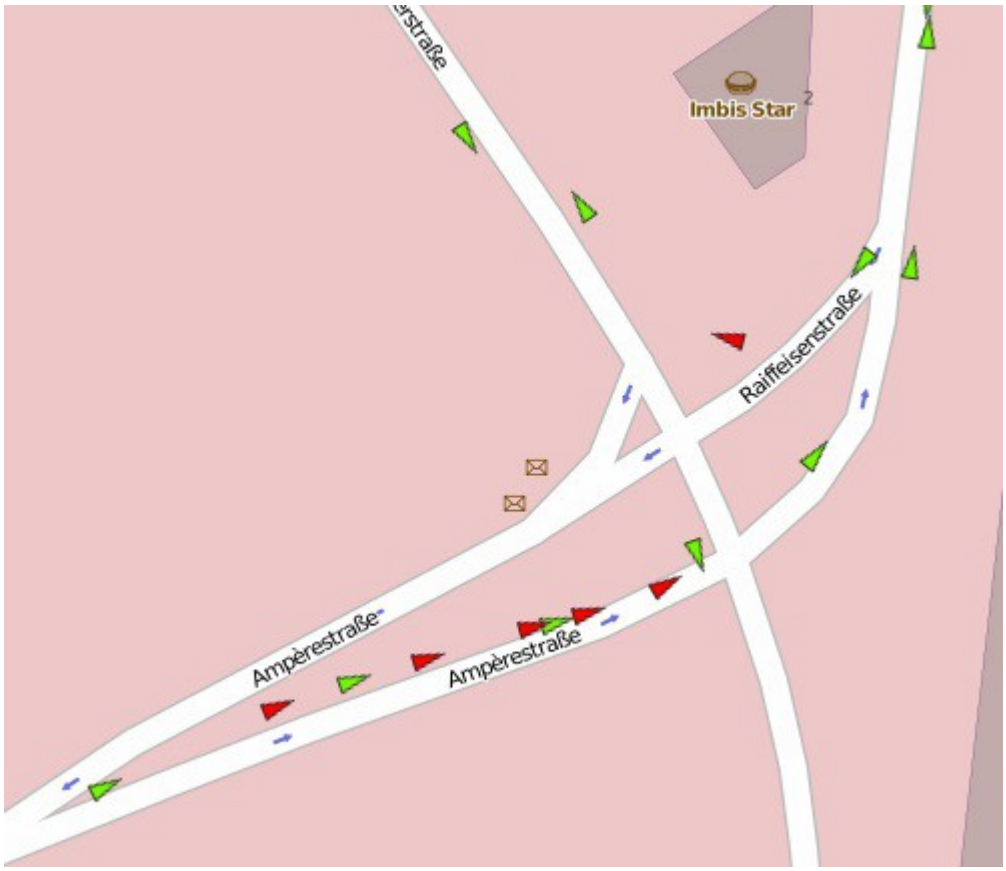
Automatic Minimum distance

Sometimes there are just to many panoramas.
This is to thin the footage.
Process → Execute minimum distance filter

Enter **20**.
It is the distance in meters:
1 m ~ 3 feet.

Click **Set**.

Deactivated panoramas are marked **red**.



It is recommended to apply **Automatic links** to fix the linking. See next page.

Automatic links

The DIY-streetview Editor can automatically link the Panoramas in the sequence of recording:
Process → Automatic links

Resulting in blue links connecting the green icons:

View: All, Active, Deactivated

This applies no change to the data.
It is just adjusts the display.

Show active and/or deactivated panoramas and links.
Give it a try:
View → DIY-streetviews → All DIY-streetviews
→ **Only active** or **F2**
→ only deactivated

View → Links → All links
→ **Only active** or **F3**
→ only deactivated

Play around with it to familiarize yourself with the view options.

For this Training we assume **Only active** for **DIY-streetviews** and **links.**

Activate/deactivate DIY-streetviews

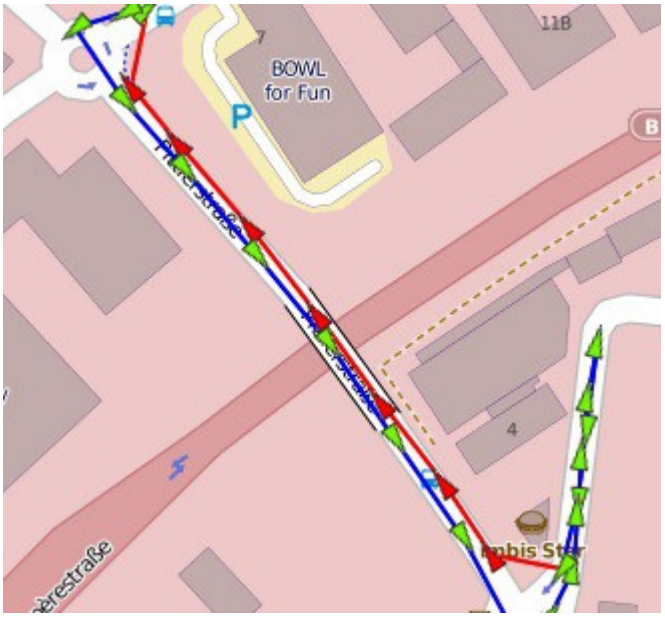
In case you want to deactivate a few more DIY-streetviews:

Mark a single green icon. It becomes yellow.
DIY-streetview → deactivate DIY-streetviews

You can manually select many DIY-streetviews by holding the **Ctrl** key on the keyboard when clicking the green icons.

In case you want to deactivate a real lot of DIY-streetviews, e.g. because a road has been recorded twice:
Select → Sequence
Click the icon at one end of the road, then at the other. All icons in-between will be marked yellow too.

Then
DIY-streetview → deactivate DIY-streetviews



Next steps might be:
View → DIY-streetviews → Only active
View → Links → Only active

Activate/deactivate Links

Links can be activated and deactivated just like the DIY-streetviews.

Mark a DIY-streetview.
Link → deactivate links
All links to that DIY-streetview are deactivated.

You can see the deactivated links with
View → Links → only deactivated

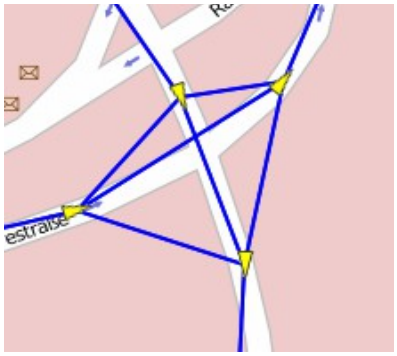
Create links

Links allow to navigate from panorama to panorama.

In addition to the automatic links you need to create links to navigate independent from the recording sequence:

At a crossroad there are 3 option to navigate:
Forward, left right.

4 panoramas need to be linked together.
Click all 4 icons holding down **Ctrl.**



Link → Create Links

Please notice that
Link → Delete links
also deletes the automatic link.

Use
Process → Undo
instead.

There are 100 Redo/Undo steps.

Delete link

Mark a DIY-streetview. Hold down **Ctrl** and mark a **neighboring** DIY-streetview.
Link → Delete links

Deleting links only works with neighboring DIY-streetviews.

Adjust position

This works for a activated and deactivated icon.
For a single icon, many icons or all.

Just grab the icon(s) with the mouse and move.

How to select icons:
Hold down the **Ctrl** key and then click one or many icons with the mouse.

or
Select → Multiple
or
Select → Sequence
or
Select → All

Ctrl+D to unselect all icons.

Adjust view direction

The direction of the icon always must be the direction the panorama really looks at.
Otherwise the links will be misplaced in the players.

This works for green, red and yellow icons.
Also works for many icons at once.
You can select by **Ctrl and click** or **Select** → **Multiple** or **Select** → **Sequence**

The adjust the direction with **PgUp** and **PgDown** keys.

When selecting many icons the directions automatically synchronize.
This helps a lot with most roads, that are straight.

Enter Meta-Data

This works best with two monitors.

Open the panorama Window with **View → Show panorama** or **Alt+P**
Click an icon to load the panorama.
Recommended: Move the panorama window to the second monitor.
Make it full screen.
You can click anywhere and then zoom in with the mouse wheel.

Now you can read street names from the panorama, then select all the icons of the road and enter the street name.

The most effective way to enter the Metadata is to first enter data that is true for all panoramas.
Then select a subset (e.g. a sequence that represents a road.) and change some of the data fields.

Last make changes for individual panoramas.

Example workflow:

Select Mode → Select all

Enter
- display name
- Postcode, City
- Suburb
- Country
- State District
- State
- Country Code, Country
- Continent

Click **Save** at the bottom of the Metadata window.

Select Mode → Sequence
Select e.g. all the icons for a street.

Enter
- streetname

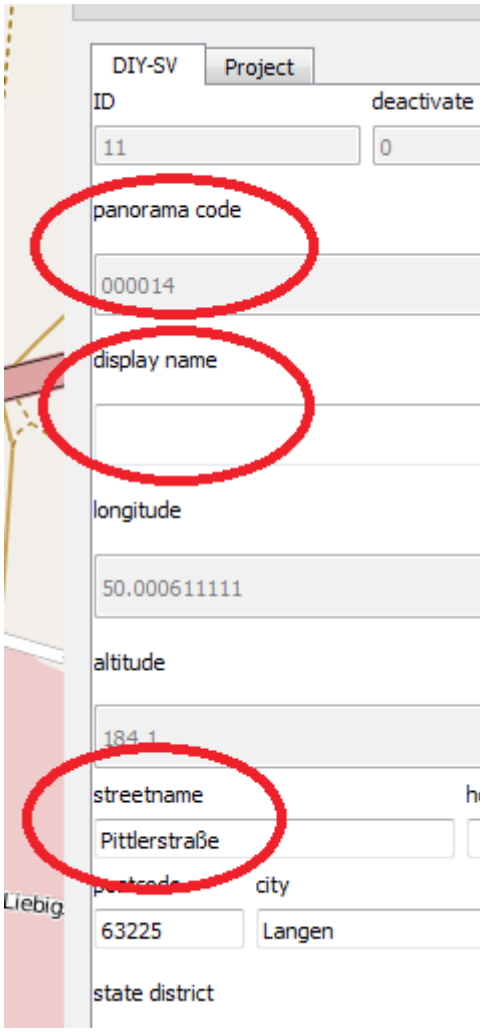
Click **Save** at the bottom of the Metadata window.

Select Mode → Single
Select a single icon.
Enter
- house no.
- maybe change the display name?

Click **Save** at the bottom of the Metadata window.

Display name can be anything:
Examples:

Building 3c
Railway mile 1545
River Themse
Floor 1
Hallway
Carpark



Our “custom Google streetview player” and krpano panorama viewer implementation can display the **panorama code**, the **display name** or the **streetname.**

You can configure this later in the player.

Save

When done save the project
Project → Save
then
Project → Export Project → to panorama Exif data

Pick (or create) an empty folder.
Only active panoramas will be copied to this folder and the Metadata saved to the panoramas Exif.

This might need some time.
Check the folder you are saving to for when done.

Customers of the DIY-streetview Camera System have received the
Editor work-flow manual v0.1.pdf that explains how to use the Editor output with the provided processing programs and players.

If you purchased the Editor only please use **Project → Export to... → csv.**

Advanced tasks:

Update

The DIY-streetview Editor and the panorama files always need to be at the same folder location.

Recommended procedure:

Save the first version to e.g.:
C:\Users\me\Downloads\Editor\DIYsvEditor

When updating, rename that folder to e.g.
C:\Users\me\Downloads\Editor\DIYsvEditor**-v1.0**

Save the updated version to
C:\Users\me\Downloads\Editor\DIYsvEditor ← **same location as before!**

Copy the content of these old folders to the new version:
DIYsvEditor\floorplans
DIYsvEditor\maps
DIYsvEditor\projects

Copy the **Licence.dat** to the new version **DIYsvEditor\licence** folder.

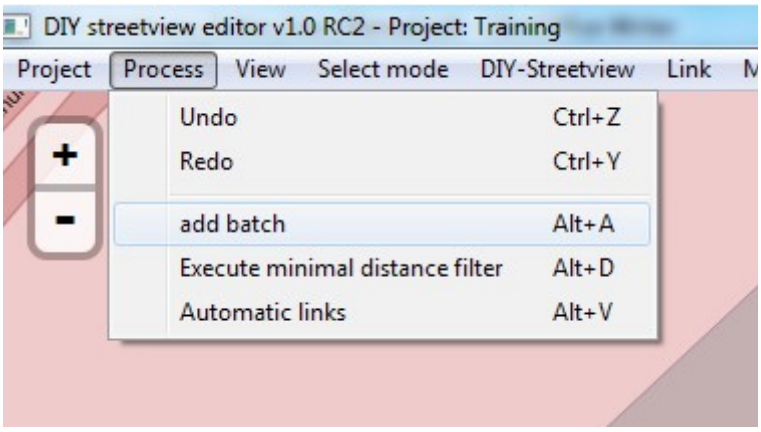
Add panoramas to project

Let's assume you have a project.
Three weeks later you record new footage and need to add it.

For this the new panorama names need to be different from the existing.
When processing the footage “offset” or “project” are the right option to create unique file names for the panoramas.

Or you could use a third-party program to mass-rename the names of the new panoramas.

Process → add batch



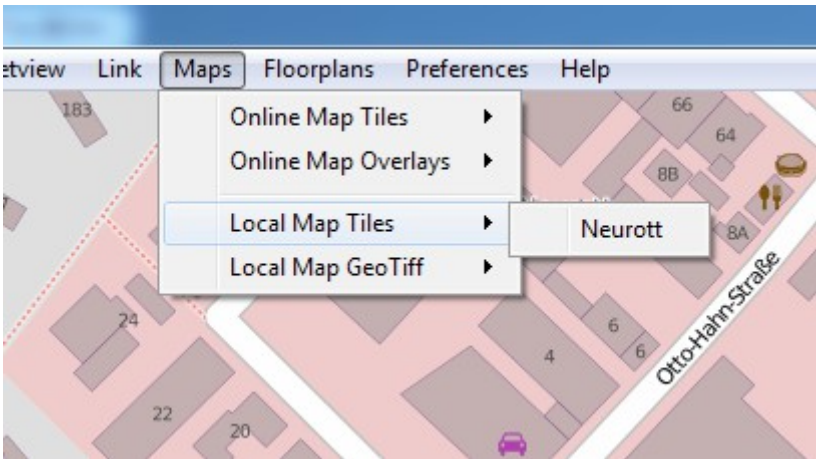
For **Automatic links** it then makes sense to select the new batch only.
Select mode → batch → 2

Add Local Map Tiles

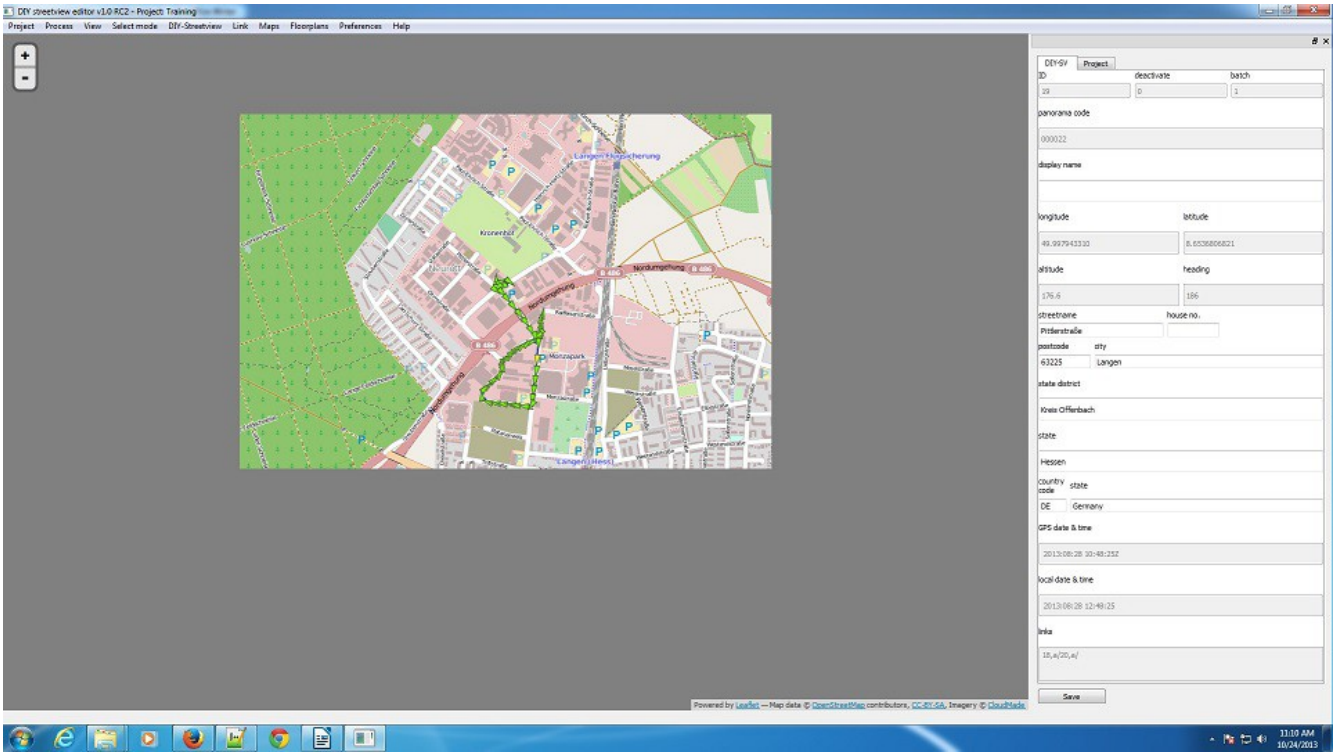
The Training data has the folder **Neurott.**
Copy it to folder **DIYsvEditor\maps\LocalMapTiles folder.**

In case the DIY-streetview Editor is already running:
Save your project. **Project → Save**
Then close **Project → Exit**
And open the DIY-streetview Editor:
Project → Open Project → Training.diypro

The new folder is then recognized:



What you should see:



Download for Local Map Tiles

Technically all 256x256 pixel tiles following the tms naming schema work.

Map tiles can be downloaded e.g. from OpenStreetMap with the JtileDownloader:

http://wiki.openstreetmap.org/wiki/JTileDownloader

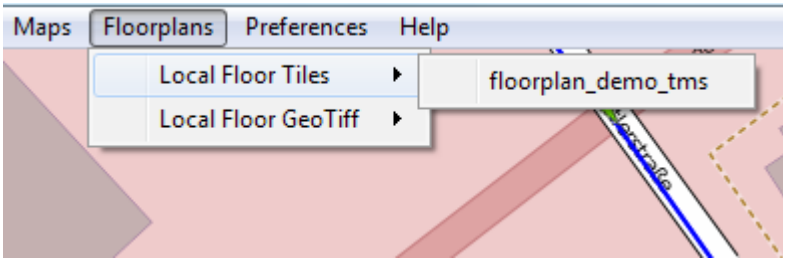
Give the tiles folder a meaningful name and copy it to
DIYsvEditor\maps\LocalMapTiles

Add Local Floor Tiles

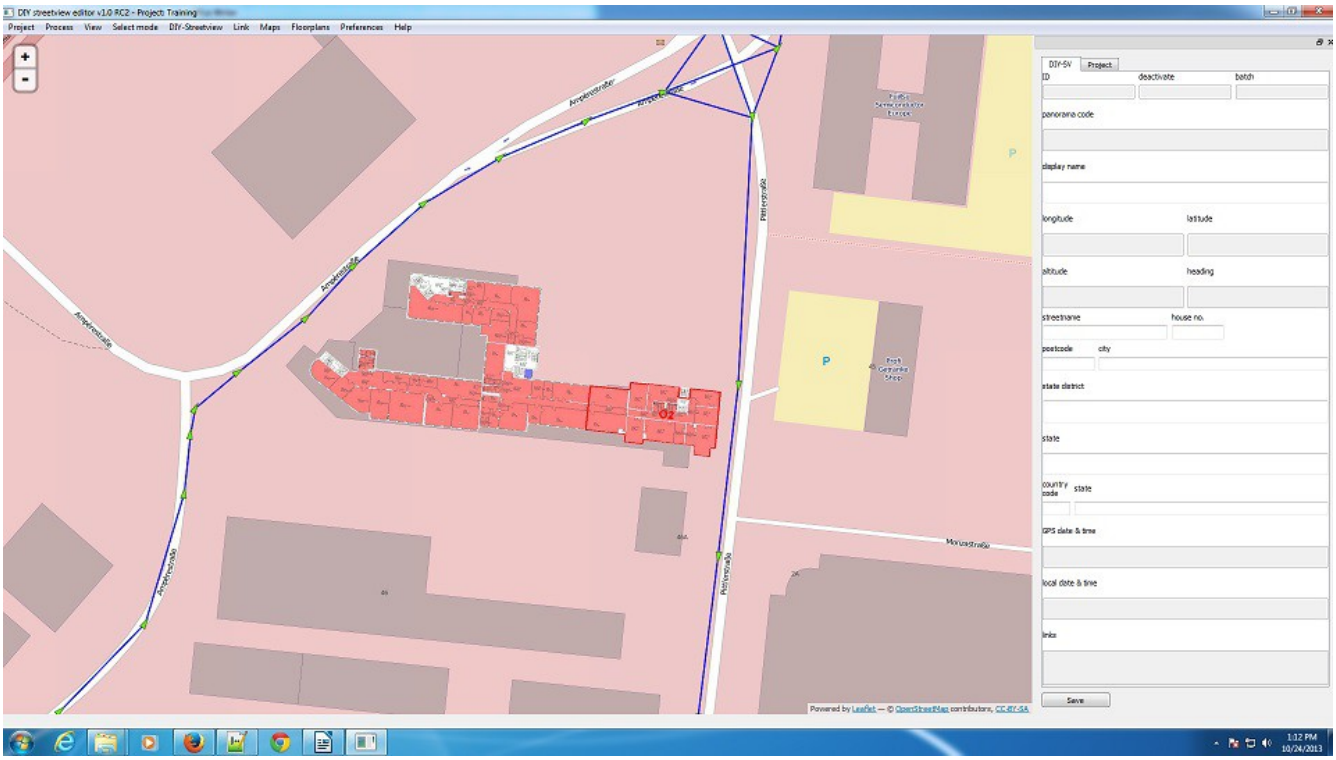
The Training data has a folder **floorplan_demo_tms.**
Copy it to folder **DIYsvEditor\floorplans\LocalFloorTiles**.

In case the DIY-streetview Editor is already running:
Save your project. **Project → Save**
Then close **Project → Exit**
And open the DIY-streetview Editor:
Project → Open Project → Training.diypro

The new folder is then recognized:



What you should see:



Add Local Map GeoTiff

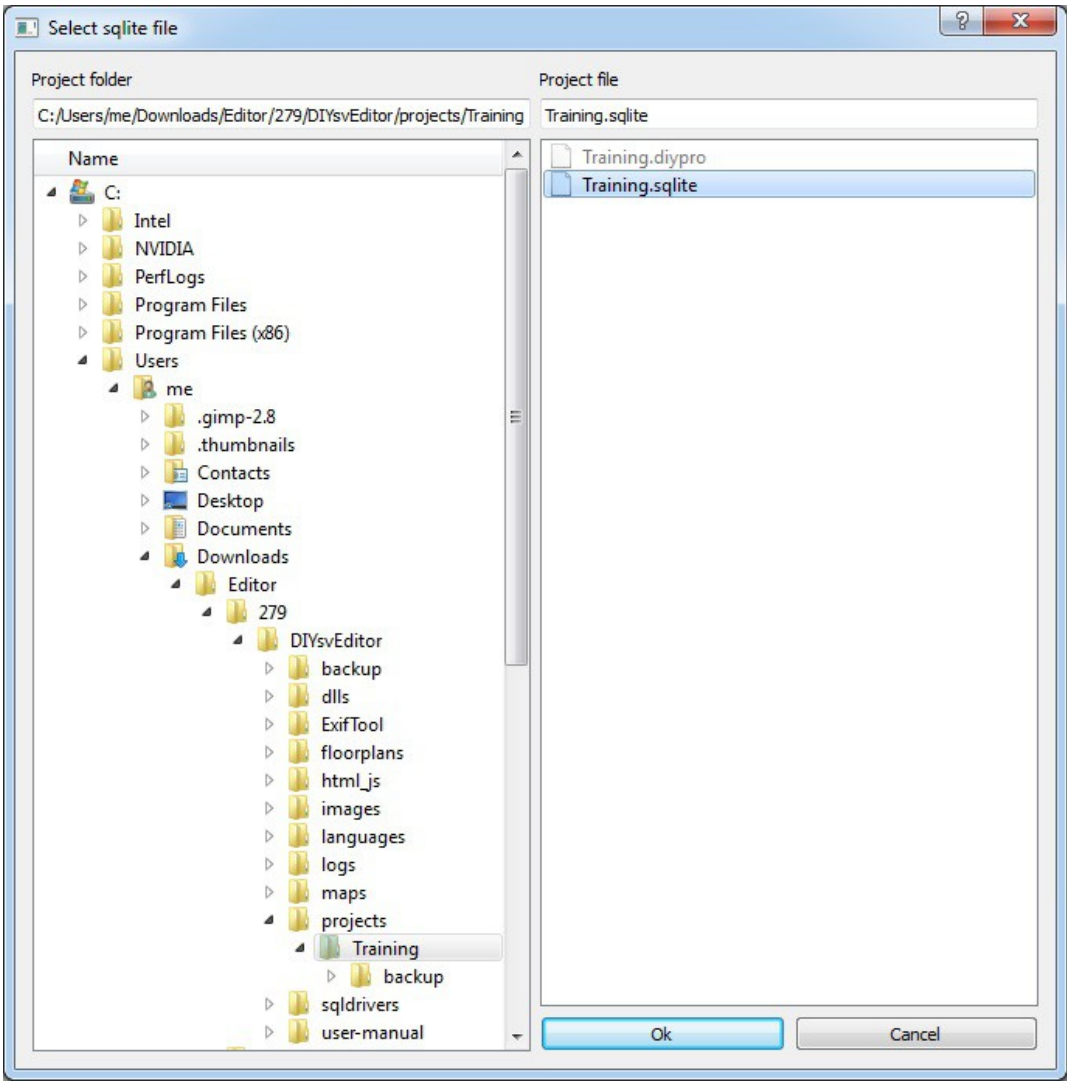
At this time you cannot simply switch between **Map Tiles** and **Local Map GeoTiff**.

Instead a new project **Training-geotiff** is needed.
Sharing the same database with the original **Training** project with Map Tiles.
This way you can later continue work with the original Training project using the Map Tiles.

The Training data has a file **Neurott.tiff**.
Copy it to folder **DIYsvEditor\maps\LocalMapGeoTiff**

In case the DIY-streetview Editor is already running:
Save your project. **Project → Save**
Then close **Project → Exit**

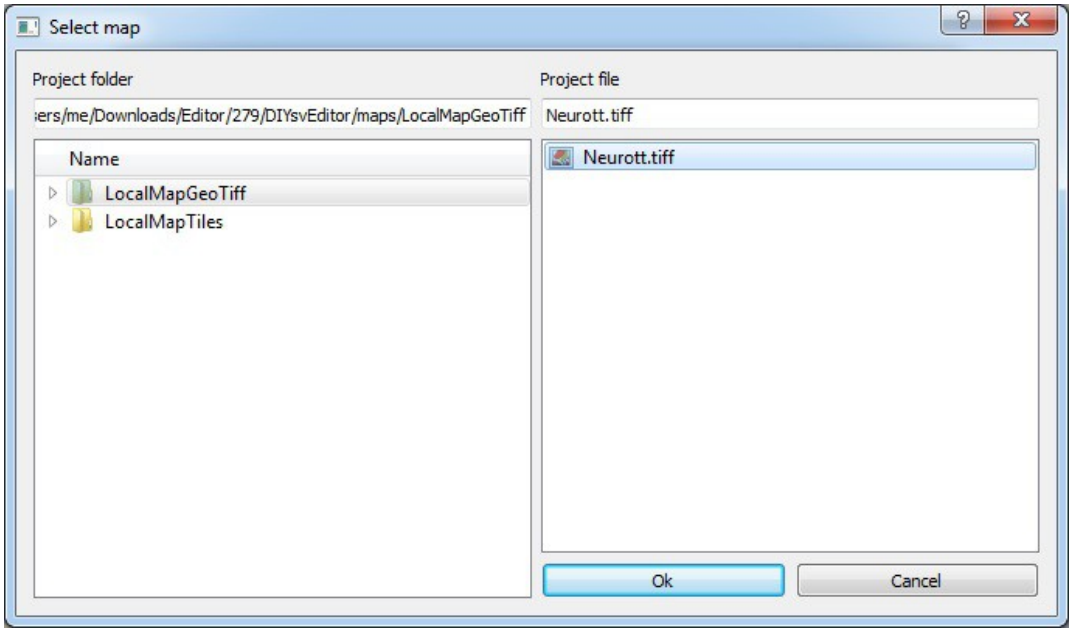
Re-open the DIY-streetview Editor:
Start a new project: **Project → New**
Project name: **Training-geotiff**
Datasource: **sqlite**
sqlite file:



Click OK.

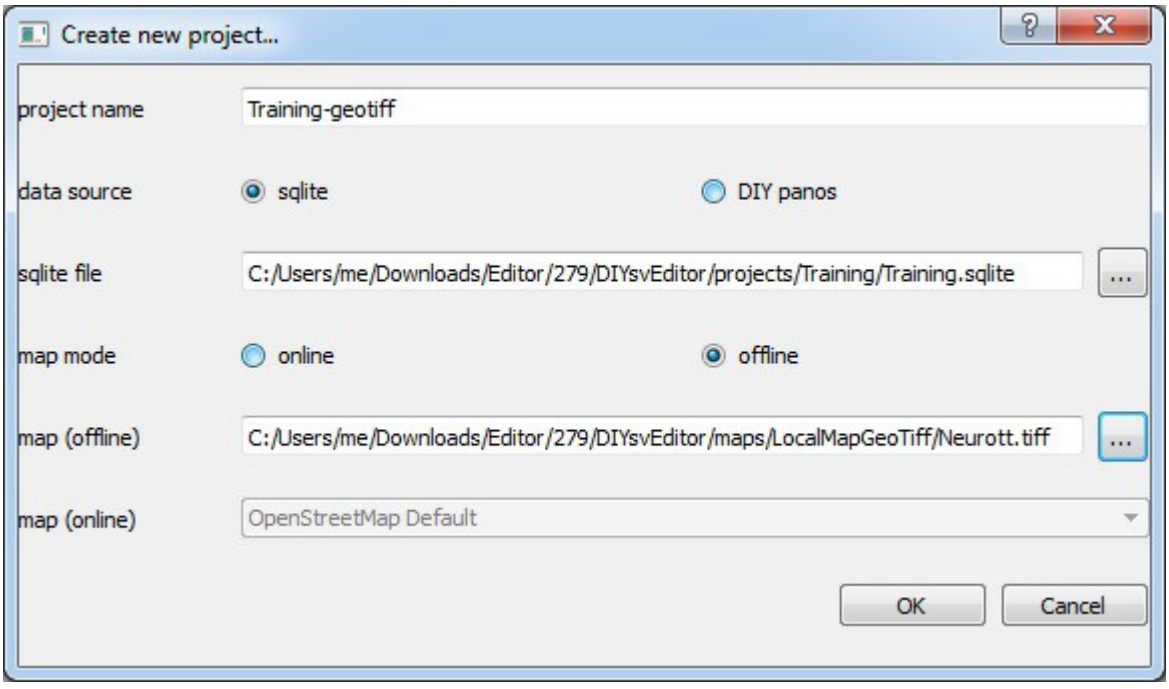
Map mode: **offline**

map (offline):



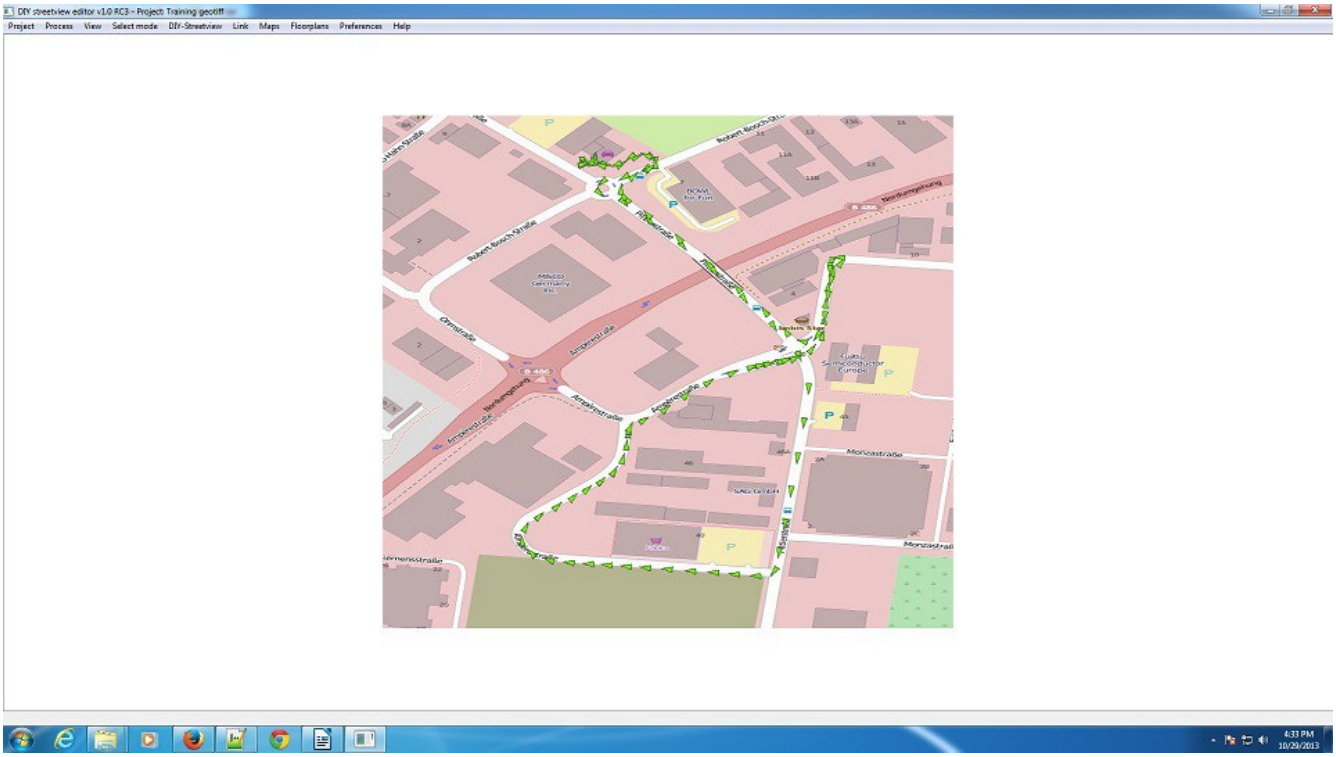
Click OK.

What you should see:



Click OK.

What you should see:



You now have 2 projects sharing the same **Training.sqlite** database.

You can continue work with either the **Training** project with **map tiles** or the **Training-geotiff** project with the **geotiff**.

Create a geotiff map for offline usage

Files are provided with the training data.
You also need gdal: http://www.gdal.org

This is just a primitive example done with free tools. A professional knows how to do properly.

We saved a screen-shot from OpenStreetMap.org as **Neurott.png**.
Then uploaded it to the Internet.

This works with the Chrome Browser only:
http://overlaytiler.appspot.com/

Location:
Ampèrestraße 63225, Langen, Hessen, Germany
Important: Pick the location from the drop-down list.

Past this URL into the “Upload” field:
http://www.diy-streetview.com/data/geotiff/Neurott.png

Click **Upload**.

Position the screen-shot on the map with the green dot and three red dots.

Copy the first 4 lines of text and add the rest:

```
gdal_translate \
 -gcp 0 0 8.648585222862266 50.001663936185025 \
 -gcp 644 0 8.65549459328463 50.001663936185025 \
 -gcp 644 899 8.65549459328463 49.995463920773624 \
 /home/me/geotiff/Neurott.png \
 /home/me/geotiff/Neurott-temp.tiff \
&& \
gdalwarp \
 -rc -s_srs epsg:4326 -t_srs epsg:4326 \
 -of GTiff \
 -co COMPRESS=JPEG \
 /home/me/geotiff/Neurott-temp.tiff /home/me/geotiff/Neurott.tiff
```

You get:
http://www.diy-streetview.com/data/geotiff/Neurott.tiff

Copy **Neurott.tiff** to **DIYsvEditor\maps\LocalMapGeoTiff**

See chapter **Add Local Map GeoTiff** how to use the Neurott.tiff created this way.
It is provided with the Training data.

Create tiles for floor-plans

Files are provided with the training data.
You also need gdal: http://www.gdal.org

Save an image as **floorplan_demo.jpg**

Gimp: (available for free from: http://www.gimp.org)
Layer -> Transparency -> Add Alpha Channel
Cut off parts for transparency.
Crop to building size.
Save as **floorplan_demo.gif**.

Upload to the Internet.
Our **floorplan_demo.gif** file is still available for you to try:
http://www.diy-streetview.com/data/geotiff/floorplan_demo.gif

This works with the Chrome Browser only:
http://overlaytiler.appspot.com/

Location:
Ampèrestraße, 63225, Langen, Hessen, Germany
Important: Pick location from drop-down list.

Upload:
http://www.diy-streetview.com/data/geotiff/floorplan_demo.gif
Click the "Upload" button.

Switch from map to satellite.

Position the floor-plan on the map with the green and three red dots.

Copy from Chrome Browser and edit the highlighted parts:

```
gdal_translate \
 -of vrt -expand rgba \
 -gcp 0 0 8.652067566663163 49.998251085301966 \
 -gcp 882 0 8.653652752190965 49.99813729104035 \
 -gcp 882 354 8.653593743592637 49.99776400948839 \
 '/home/me/Downloads/geoTIFF/floorplan_demo.gif' \
 '/home/me/Downloads/geoTIFF/floorplan_demo.vrt'

gdal2tiles.py -s EPSG:4326 -z 0-22 '/home/me/Downloads/geoTIFF/floorplan_demo.vrt'
'/home/me/Downloads/geoTIFF/floorplan_demo'
```

Fix the numbering of the Y value:
Program zxy2tms is available only to our customers.

```
'/home/me/DIY-streetview/software/zxy2tms' \
--in='/home/me/Downloads/geoTIFF/floorplan_demo' \
--out='/home/me/Downloads/geoTIFF/floorplan_demo_tms'
```

Copy the **floorplan_demo_tms** folder to **DIYsvEditor\floorplans\LocalFloorTiles**

A ready-to-use **floorplan_demo_tms** folder is included with the Training data.

See Chapter **Add Local Floor Tiles.**

Known Issues

Process- > Automatic links
Selects all icons, not just the active, visible icons.
To undo the damage:
Process → Undo or **Ctrl+z.**

Workaround:
First do automatic links, then deactivate icons e.g. by the minimum distance filter.

Minimum distance filter
Process → Execute minimum distance filter
Always is for all the data.
To undo the damage:
Process → Undo or **Ctrl+z.**

Project -> Export to..
panorama exif-data and **csv** are the only export formats working.
MySQL we are working on.

panorama exif-data is what you need for the DIY-streetview Camera System
csv allows to use the data with your own work-flow.

Switching between tiles and geoTiff is not implemented yet.
Workaround:
Have 2 projects sharing the same sqlite database.
See chapter **Add Local Map Geo Tiff**.

Combining tiles (e.g. map) and geotiff (e.g. floorplan)
Is not available. We are checking how this can be done.

Ideas

We are interested in what features you want.
Please email sales@diy-streetview.com

Or consider a phone call:
www.diy-streetview.com/contact